

# ARIZONA MINER.



VOLUME IV.

PRESCOTT, ARIZONA, SATURDAY, APRIL 6, 1867.

NUMBER 7.

## MINING DEPARTMENT.

### ERMAN EHRENBURG, ONE OF THE ARIZONA PIONEERS.

Since the untimely death of Mr. Ehrenberg have published several accounts of him as a favorite citizen pioneer miner and his life in our Territory. A late Southern paper gives some facts and incidents in the life of Mr. Ehrenberg which we have not noticed, and from which we are informed that at the age of sixteen he left his home in Germany for the purpose of aiding in the independence of Texas; and the curious story of his escape from the hands of Colonel Fannin and his companions to the letter, except in the fact of his being the only survivor of the party, over whom he had surrendered, and in violation of terms, were taken out in cold blood, and shot down in cold blood. A pardon was given and carried out by General Taylor, in 1836. But Yoakum's history of Texas says there were some twenty-seven who escaped, and Mr. Ehrenberg's name among the number. There is a gentleman in San Francisco, a very prominent iron miner, and a boy like Ehrenberg, who was a member of that ill-fated company, and made his escape the night before the capture. They first met afterwards in San Francisco, and the intensity of feeling manifested by both parties, and the fact that Ehrenberg was well remembered by parties present, was in 1859, thirteen years subsequent to the terrible affair before mentioned. Their meeting was like two brothers who had supped each other dead.

For this event in Texas, Mr. Ehrenberg returned to Germany and completed his education at Freiberg, and was for several years engaged in the German mines. Then he emigrated to the Pacific coast, since which time he has spent probably not more than two years in what may be called civilized life. He is in the strictest sense, an experienced pioneer miner in the wilderness, for the life of an unknown posterity. The tempestuous weather of life ended in cold air, and a picture to the living, and weighs heavily upon his companions and well-wishers on earth's sphere. 'Tis like a melting bell, burning steeply, which continues from the flames to send out the hours.

Mr. Ehrenberg's death adds another to the sacrifices that have been made for the development of Arizona. The list is a long and contains the names of many valuable enterprising spirits, who have passed the gulf between earth life and the glorious new land of immortality, and whose spirits, as we know, are still surrounding us, witnessing our sufferings and trials—waiting to welcome the weary to the spring of the second world.

### SHAFTS GOING DOWN.

The Nevada Enterprise says the Bonner shaft of the "Gould & Curry" Company, on the Nevada coast, is now about 750 feet deep, and is deeper by the time it is recommenced a few days later, after a cessation of a year. Three shifts of men—six men a shift—are pushing forward, or rather upward, the work with great energy, and it will not be long before the shaft will be 1,000 feet deep. The hoisting and pumping machinery is of sufficient capacity to allow of the depth of 1,000 feet, or more, and the future prospects of the Company are very flattering. The next in point of depth is the new shaft of the Imperial and Erie Companies, which has now attained a depth of 740 feet, and is being rapidly deepened. The present machinery will take it to the depth of nearly or quite 1,000 feet. The shaft of the Savage Company, on the coast, is now about 450 feet deep, and is being recommenced last Monday after being discontinued for a year. The north compartments are being sunk at the same time, and when at a convenient depth, the shafts will be raised from the bottom, instead of being sunk from the top. Hoisting and pumping machinery are the powerful for the purpose in the State, and every engine being a beam engine of some power, and every portion of the machinery being of a correspondingly powerful and substantial description. It works in the most perfect manner, so smoothly that it can scarcely be heard when standing near it. Either of the shafts above mentioned will be at least 1,000 feet deep this fall. The Chollar shaft is 700 feet deep, but is not being deepened at present. The shaft of the Imperial Company is also 700 feet deep and is being sunk deeper. The Opbe-Mexican shaft is about 620 feet deep, and is being continued for the present in order to open up the level, 60 feet below the ninth or tenth level of the mine. A drift or gangway is being opened for that purpose, running towards the ledge through the hard and blasting rock, the bottom of the shaft being in the west wall of the ledge, as well as that of the Hale & Norcross Company, is not in the right place. Companies should remove their works to the same as the Gould & Curry, Savage and Chollar shafts have done, and so conform to the dip of the lode to get, as well as to take advantage of the fact that the Gould & Curry shaft, for instance, gains 200 feet, the top of the shaft being 240 feet below the level of the croppings of the lode. With such deep shafts going down, the view of the large bodies of rich ore of late in the Hale & Norcross and the Opbe-Mexican, we may well feel encouraged over the prospects of the Comstock ledge, and the prospect of Virginia and of our silver generally.

## GOLD MINING IN NEW MEXICO.

It would seem there is no limit to the vast mining territory upon this coast. In a late St. Louis paper we find the following account of the re-opening and successful working of mines in New Mexico: "A gentleman connected with the Placer Mining Company of New Mexico—Dr. M. Steck, formerly Indian Superintendent of that Territory, arrived in St. Louis on Friday last, with a considerable amount of the precious dust. His object for visiting the city, on his way Eastward, was principally to engage the skill of our artisans in furnishing the necessary machinery for mining, and he accordingly left an order for a ten stamp mill, with the requisite accompaniments. The quartz of the Placer Mountain turns out, it seems, some three hundred dollars per cord—an amount above the average of what may be rated first class paying lodes. With a small five stamp instrument Dr. Steck extracted two hundred ounces in the short space of a couple of months. The Placer Mountain is within thirty or thirty-five miles of Santa Fe; but through the medium of the clear and pure atmosphere of that region it seems almost to overhang the western suburb of the quaint old Spanish town. Indeed, with a brilliant sunset—and the weather there is unmelodious for months together—one can hardly believe that a space exceeding a league at farthest intervenes between the city and the golden Sierra. The mines of this mountain have been worked for over a hundred and fifty years. Its wealth was known to the earliest pioneers—the San Francisco Monks—and even before their advent, the natives of the country supplied themselves with ornaments from its rich resources. Since the accession of the Territory, about twenty years ago, mining operations have been confined to very limited dimensions; the old shafts have scarcely been visited; and with the exception now and then, of an enterprising searcher among the caches, when a rain occurs, for a nugget, or the pulverization of a cart load of stone by the most primitive processes, to obtain a pennyworth or two, the whole place has until recently shown a total abandonment.

Occasional experiments made from time to time have kept alive the traditions of the wealth concealed within the mountain, and efforts were made five or six years since to establish a company for the re-opening of the old works and realizing the treasures they contain. The present association is the result of those efforts. Geologists and practical experts in gold mining have given the opinion without a dissenting voice, he believe, that the Placer is as rich in golden ore as any mountain on the Pacific slope or along the backbone range of the central portion of the continent. It is a magnificent pile, covered with heavy timber to its very summit, and abounds besides with lead and iron ores of the purest character, and with coal that equals, in all the uses to which it may be applied, the finest anthracite. Merchandise has absorbed the attention and capital of New Mexico, and to this cause is to be attributed the indifference which has been exhibited toward these mining resources. The projected route of the Atlantic and Pacific Railroad lies within the shadow of the Placer Mountain. To reach its terminus on the Rio Grande, it must pass along the very base of this very rich promontory, which stands midway between Santa Fe and Albuquerque. Without doubt the mountain will become a grand depot for that continental highway, capable as it is for supplying wood, coal and metals of almost all descriptions. Complete the road, and instead of a single ten stamp mill we shall have orders for a thousand; while two thousand ounces of dust per month will take the place of the sum now mentioned. Farther west—on the same range—probably six or ten miles distant—other lodes have been discovered within a short time past that give evidence of even greater richness.

**NEW MINING INVENTION.**—The Stockton Independent gives the following account of a recent invention: "E. R. Chapin, of Sonora, has recently invented a very ingenious contrivance for saving gold lost from quartz mills, and which he terms a concentrator and separator. The model which he has determined to send on to Washington, in hopes of getting out a patent for his invention, could easily be placed in a person's coat pocket. It is entirely different every way from any separator or concentrator that we have seen, used by quartz miners. A shallow pan, called the separator, elevated an inch above the concentrator, first receives the water, sediment, quicksilver and gold escaping from the mill above. The bottom of the separator being deeper than the sides or mouth where the water flows over, the quicksilver and gold naturally settles down, while the light sand and sulphurets flow over with the water into the concentrator, which looks somewhat like the shallow top of a soap tureen. Small holes are perforated in the bottom of this concentrator, through which the sulphurets pass into small pans beneath, while everything else flows over the top into conduits which convey it away. The whole machine is suspended on four stout wires, each fastened at the bottom in a strong framework. Diminutive cog wheels attached to a cylinder, which is kept in motion by the action of the mill above, sets the machine in motion, and gives both the separator and concentrator the same motion as that of a child's rattle when rocked gently.

## BOILER TUBES.

An improved method of fixing and unfixing the tubes of steam boilers has been provisionally specified by Mr. D. McDowell, of Kingston, Jamaica. It is a well known fact that many accidents occur to boilers in consequence of the tubes being allowed to remain too long without being taken out and cleaned, and the interior of the boiler properly examined, and if need be, repaired. It is generally admitted that the great reason they are allowed to remain so long is owing to the expense incurred by their removal and replacing. It is frequently the case that tubes which are very little the worse, and would have lasted several years longer, have been entirely or almost destroyed by taking them out, and in many instances the tubes are allowed to remain until the steaming qualities of the boiler are entirely destroyed, rather than incur the expense of replacing them. By the proposed arrangement these evils will be removed. In the first place, the tubes can be fitted in their places in less than one quarter of the time generally taken for such purpose. In the next place, they can be made to fit both tube plates perfectly tight, so that there will be no danger of cracking or bursting the ends in drifting them, which is very often the case when tubes do not fit tightly in the tube plate. The greatest benefit of all will be the facility with which the tubes can be taken out when required, cleaned, and put back again. In carrying out this invention one end of the tube (the end next to the smoke box) is to be enlarged 1-8th of an inch in diameter more than the rest of the tube, the enlargement to extend about 1-2 inch from the end, which will be enough to allow a mandril to be applied to drift it up in the usual way. It will at once be seen that the holes in the tube plate at the smoke box end will be 1-8 inch larger than at the fire box end. Thus the tube entering from the smoke box end will pass through a hole 1-8 larger than itself, until the last inch or so; then it will enter the two plates tightly, and a blow or two of the hammer will set it up to its place. It may be argued that this arrangement would considerably weaken the tube plate at the smoke box end, by reducing the spaces between the tubes 1-8 inch less than the other, but such will not be the case, as the plate at the smoke box end is not exposed to the direct action of the fire, as is the plate at the fire box end, therefore there is no necessity for its being of the same strength; but admitting that it does weaken it, it will be easy to add as much to the thickness of the plate as would give it the same sectional area as the other. The inventor considers 1-8 inch enlargement is enough for the largest tube, and not too much for the smallest, as that will allow of the tube being increased to the extent of 1-16th of an inch on the surface (1-8 inch on the diameter), which is quite as much as should be allowed to accumulate on any tube before it is taken out, especially where economy of fuel is an object. Any person acquainted with the repairs of tubular boilers will see at once the advantage which this system of tubing presents.

### THE GREAT CENTRAL COPPER MINE, ARIZONA.

This mine is located on Williams' Fork, 9 miles from the Colorado River, and about 1,000 feet from the celebrated Planet mine, which has been shipping ore to this city for some time past. It is thought by some to be on the same vein with the Planet; but the supposition has not yet been demonstrated. The mine is owned chiefly by San Francisco capitalists, and is under the superintendence of Mr. William Thompson. Work was commenced upon it about three years ago, but until quite recently has progressed but slowly in consequence of the unsettled state of the country, and the difficulties of transportation between this city and the Colorado. These difficulties, however, having now been measurably removed, active operations have been commenced, which have already resulted in most important developments.

According to the report placed at our disposal, the company have two small furnaces running, turning out copper from 91 to 96 per cent. fine, which is being shipped to this city. A large lot of this copper was received a few days since, which has been sold for fifteen cents per pound—\$300 per ton. The cost of delivering such copper here is but a little over \$100 per ton. The company has two more shipments on the way, both of which amount to about thirty thousand pounds. Regular shipments will be made hereafter.

The ores of this mine are oxide and carbonates, very little or no iron or sulphur being present; hence the company is able to turn out at once smelting a very good article of copper. Some of this copper has been used by the brass foundries of this city, who have pronounced it a very fair article for many commercial purposes, just as it comes from the furnace. Within less than two months they will have a larger furnace in operation, which they think will be able to turn out from three to five tons of copper per day.

The company own two parallel ledges of 3,000 feet each. Only one ledge has as yet been developed to any considerable extent. Upon this an incline has been sunk to the depth of one hundred feet, at which point there are some indications of sulphurets coming in. At the depth of about fifty feet drifts have been run each way from the shaft about one hundred feet, all the way in good ore—vein varying from five to seven feet thick. The shaft is also connected with the surface by a tunnel, through which the ore will be taken out. The outcrop of the vein has been stripped quite a distance, developing good ore all the way. The superintendent estimates that he has fully five thousand tons of ore opened to sight, which will average a yield of twenty-five per cent.—San Francisco Press.

## MAKING COPPER DIRECT FROM THE ORE.

Dr. F. Le Clerc de Paris, has recently patented a process by which copper ores are broken into pieces, and roasted in a reverberatory furnace, and when they attain a red heat, water is made to fall upon it like rain. When the white vapours disengage, the heat is increased so as to effect the fusion of the mass, after which it is run off, a matt of a very white color being obtained. Secondly, the white matt is broken in pieces, and roasted in a reverberatory furnace, in presence of a large amount of air. The heat is first slowly applied in order to prevent the fusion of the mass, and immediately a red heat is obtained he projects water in the form of a fine rain on the mineral mass, care being taken to well stir and subdivide it with a stirrer, in order that the water shall act on the greatest number of points. Immediately copper appears in a metallic state the above roasting process is repeated, until the larger pieces of matt have become transformed into metallic copper which is rapidly effected. The addition of from only two per cent. of coal in powder to the mass, while at a red heat, facilitates the roasting, although it is not absolutely necessary. The condition of the ingredients may be ascertained by withdrawing some of the large pieces from the furnace and breaking them. The roasting should be continued until these pieces indicate the presence of copper in a metallic state, at which time the heat is increased, so as to effect the fusion of the mass, and a mixture is added of the powdered charcoal, or coke, lime or other calcareous matter, after which the whole is agitated and mixed as completely as possible. Thirdly, a considerable chemical action will now be produced in the metallic bath. The supernatant scoria is removed by the aid of a suitable instrument, and air admitted without delay into the interior of the metallic bath. After numerous experiments, on a comparative large scale, it has been found that the action of steam, as previously employed, in conjunction with air, is entirely useless, as the inflation or injection of air into the bath, which may be effected in any suitable manner, will succeed perfectly by employing a tube of refractory clay. The enormous chemical action produced by the injection of air into the metallic bath generally exceeds the degree of oxidation required, for which reason recourse should be had finally to charcoal and wood poles for stirring. The copper is tested from time to time, until the metal assumes a real tint, and the silky appearance and malleability desired, after which the melted metal is run into suitable apparatus, so arranged as not to permit of the action of air on the metal in fusion, and having only one opening for the introduction of the metal. In this manner copper may be produced not only of commercial value, but suitable for rolling direct from the ore. In these cases it has been assumed that the ore "moss" of Algeria has been employed, containing from two to ten per cent. of pure metal; but when treating grey copper of greater purity the metal is obtained in a single operation; for this purpose, the raw ore is first melted, and the slag removed immediately, on which the injection of air into the metallic bath should commence.—Mining Index.

**THE FAHRANAGAT MINES.**—The Salt Lake Valley of Jan. 19th has the annexed in relation to these mines: "Messrs. Crippen and Raymond arrived on Thursday from the Fahrnanagat mines, where the former has been for some time engaged in scientific explorations and the testing of ores. The latter is the representative of eastern capitalists, has invested largely. Mr. Ely accompanied the party, he having sold out his interest for \$35,000, and will at once proceed East. The specimens he takes with him bear indications of the richness of the precious ores which abound in these regions. The bulk of the ore destined for the eastern market, has been shipped by the way of Austin and San Francisco. These gentlemen say that the results far exceed their most sanguine expectations. On the other side, we learn that Dr. Conger is not so sanguine, his operations not being so successful as the others, but it was in consequence of the failure in his smelting operation, he having not been engaged in the pursuit of mining. There is sufficient evidence, however, that next spring there will be an extensive emigration to Fahrnanagat, and the mines throughout Utah. The fuel mill at Hot Creek is said to be turning out at present \$18,000 of the precious metal per month.

**WASTE IN GOLD MINING.**—There appears to be as much waste in washing quartz in Australia as in California. A correspondent of the London Mining Journal states that while on a recent visit to Clunes, Australia, he took samples of the refuse sulphurets of gold washings, belonging to three companies, and obtained from them gold at the rate of 28 oz. 6 dwt., 29 oz. 9 dwt., and 30 ounces per ton.

### Dissolution Notice.

The co-partnership heretofore existing between the undersigned, and known under the firm name of Clutter & Darling, dealers in Drugs and Medicines in the town of Prescott, A. T. is this day dissolved by mutual consent. J. E. CLUTTER, E. DARLING. All persons indebted to the above firm are requested to call and settle with E. Darling, who will continue the business at the old stand. E. DARLING. Prescott, A. T. Feb. 27, 1867. 8-3c.

## SAN FRANCISCO ADVERTISEMENTS.

**AMERICAN EXCHANGE**  
SANSOME STREET,  
Corner of HALLECK, SAN FRANCISCO.

### "THE EXCHANGE"

Is a GOOD FAMILY HOTEL, containing two HALLS, DEEPLY FURNISHED ROOMS, extending from Halleck to Sacramento streets, and is FIRE-PROOF. LADIES' ENTRANCE—Corner Sansome and Halleck Streets. Prices low to suit the times. T. SARGENT, Proprietor.

### OCCIDENTAL HOTEL.

Corner Montgomery and Bush Streets, SAN FRANCISCO.

This house possesses all the requirements of a first-class hotel, its spacious reading room, with a large mineral cabinet, and extensive collections of specimens from the different mining regions of the Pacific coast—Branch Telegraph Office connecting with lines throughout the country—and news stand—all contributing to make it the headquarters and home for the California business man and tourist. The Table of this House shall not be excelled by any. Board, three dollars per day. LEWIS LELAND & CO., Proprietors.

### V. CUSHING,

Agent for the purchase and shipping of MACHINERY OF ALL KINDS.

Special attention given to Quartz Mill Machinery and Findings, and Miners' Material of every description. Being a Practical Machinist, and giving my personal attention to the execution of orders, I can guarantee the best class of work at the lowest prices in the city. Having completed arrangements with Horace McMurtrie & Co., 22 Kilby Street, Boston, and houses in New York, I am prepared to furnish Machinery of every description, Cotton and Woollen Mill Machinery, etc., at the lowest manufacturer's prices. Parties in the eastern States will be reliably furnished with costs of Mining Machinery of every description on application. Refer by permission to Governor F. F. Low, C. T. Meador, Stockton, Jacob Underhill & Co., San Francisco, J. W. Stowe, Russell & Erwin Manufacturing Company, Coffey & Rindson, San Francisco, George E. Ghyas, Chief Engineer California Steam Navigation Company, San Francisco. Office No. 120 Front St., San Francisco, 17m3.

### ETNA IRON WORKS,

S. E. cor. Fremont and Tehama sts., SAN FRANCISCO, Manufacture QUARTZ MILL, SAW MILL, Flour mill, and amalgamating machinery of all kinds.

Sole agents for this coast of the celebrated "Tyler Water Wheel," of which there are now upwards of 1500 in use in the Atlantic States and on this Coast. Citizens giving full particulars forwarded to any one desiring. Wheeler & Randall's, Hephorn & Peterson's Amalgamators, and all other kinds, furnished at short notice. Agents for the Pacific Coast for "Trebach's" Piston Packing. Any number of recommendations can be furnished for this Packing from parties using the same in this city and Sacramento. Hanson's Crusher. The best now in use in this State. Particular attention will be given to drawings of all kinds of machinery. Parties purchasing machinery will be furnished with a set of drawings of the same free of expense. By strict attention to business we hope to merit the patronage of the public, and shall always endeavor to be prompt and give satisfaction to our customers. 15m3 Hanson & Co.

### SAN FRANCISCO PIONEER SCREEN WORKS,

JOHN W. QUICK, Manufacturer, REMOVED TO Vulcan Iron Works, Fremont St. Bet. Mission and Howard, San Francisco. SCREEN PUNCHING in all its branches. Quartz mill owners using my RUSSIA IRON SCREENS will save two hundred per cent. Guaranteed to be the best and cheapest in use on the Pacific Coast, and will not rip or tear. Orders solicited and promptly attended to. N. B.—J. W. Quick is the only competent and successful manufacturer of screens on this coast, having made screens for the principal mills for California and the adjoining Territories for many years. 17m3

### GEO. F. HOOPER & CO.,

San Francisco and Fort Yuma, California, and Maricopa Wells, Arizona.

### COMMISSION MERCHANTS,

And general dealers in Groceries and Provisions, LIQUORS, DRY GOODS, BOOTS AND SHOES, CLOTHING, Hardware, AND GENERAL MERCHANDISE.

### LA PAZ ADVERTISEMENTS.

**GRAY & CO.,**  
LA PAZ and PRESCOTT, ARIZONA, Merchants.  
July 1, 1864. vis<sup>d</sup>

### LA PAZ, MOHAVE, PRESCOTT CASH STORE.

The undersigned wishes to inform the public that in a few days he will receive by the schooner Towanda, a large stock of goods, comprising a large stock of Groceries, Clothing, Boots and Shoes. A fine assortment of Wines and Liquors, Cheating and Smoking Tobacco, Havana Cigars, Cigarette Paper, Hats, Dried Fruits, 1,000 sacks of Flour, 120,000 lbs. Barley, 200 Sacks of Beans. A lot of Potatoes and Onions, 20,000 feet of Assorted Lumber, Windows and Sash Doors. Which he intends to keep constantly on hand at La Paz and Fort Mohave, and intends to sell the same at the LOWEST POSSIBLE FIGURES FOR CASH. MANUEL RAVENA. P. S.—Soon after January 1 I will also have a complete stock of goods in Prescott, at the store formerly occupied by Jacob Elias. 19d M. R.

### LOS ANGELES ADVERTISEMENTS.

S. B. CASWELL. J. P. ELLIS. **Caswell & Ellis,** WHOLESALE AND RETAIL DEALERS IN STAPLE & FANCY DRY GOODS, GROCERIES, PROVISIONS, AND GENERAL MERCHANDISE. AGENTS FOR CALIFORNIA POWDER WORKS CO. No. 1, Arcadia Block, Los Angeles Street, Los Angeles. 3m3

### TOMLINSON & CO.,

FORWARDING AND COMMISSION MERCHANTS. LOS ANGELES AND SAN PEDRO. STEAM COMMUNICATION BETWEEN San Francisco, San Diego and San Pedro. The California Steam Navigation Company's Steamship Pacific, CHARLES THORNE, Commander. Will make regular trips, leaving as follows: San Francisco, September 13 and 25, and October 6, 18 and 30. San Diego, October 9 and November 3. San Pedro, September 16 and 28, October 11 and 21, and November 4. 1717

### STAGE LINE TO FT. YUMA.

On and after Monday, September 10th, the stage of the undersigned, carrying the United States and Quartermaster's mail, will leave the Exchange, at Wilmington, California, for Fort Yuma, at 4 o'clock every Monday, passing through Los Angeles and San Bernardino. Arriving at Fort Yuma the following Friday. Returning, leaves Fort Yuma the following Sunday at 6 o'clock a. m. LETTIE'S PACKAGES, ETC., Forwarded on Reasonable Terms. The Overland Stage from San Francisco, leaves Los Angeles every day; the Steamer Pacific leaves Wilmington three times each month. The stage from San Diego to Los Angeles leaves only once a week, and the steamer once a month. BANNING & CO. Wilmington, Cal. Sept. 6, 1866. 19d

### UNION WAGON FACTORY.

Persons interested in Arizona mines can have all kinds of Machinery repaired at this Factory. Wagon Making, Blacksmithing, —AND— Turning in Wood AND IRON PROMPTLY EXECUTED. All work done in this establishment is warranted, and our advantages are such that we can execute work with dispatch. 24d BANNING & CO. Wilmington, Dec. 1866.